

**LWG Comments on Table 2.1-1. Chemical-Specific ARARs for Remedial Action at the Portland Harbor Superfund Site**

Medium	Regulation/Citation	Criterion/Standard	Comments	LWG Comments	EPA Response
Protection of surface water	Clean Water Act, 33 USC 1313 and 1314. Most recent 304(a) list, as updated up to issuance of the ROD	Under Section 304(a), minimum criteria are developed for water quality programs established by states. Two kinds of water quality criteria are developed: one for protection of human health, and one for protection of aquatic life.	Relevant and appropriate for cleanup standards for surface water and contaminated groundwater discharging to surface water if more stringent than promulgated state criteria. Relevant and Appropriate to short-term impacts from dredging and capping if more stringent than promulgated state criteria. Relevant and Appropriate as criterion to apply to point source discharges used in implementing the remedy, if applicable.	With respect to the first sentence, this should be qualified as noted in the 2/10/10 letter from Lori Cora to Patricia Dost: "If the State's water quality criteria is promulgated after the most recent NRWQC for that contaminant is published, but adopted a criteria less stringent than the NRWQC due to water body-specific reasons, per Subsection 2(B)(i), EPA may determine that the NRWQC is not relevant and appropriate as long as the remedy will be protective using the State promulgated standard." With respect to the last sentence, the LWG disagrees that all federal water quality standards are "relevant and appropriate as criterion to apply to point source discharges used in implementing the remedy, if applicable." The federal ARAR applicable in this circumstance is Clean Water Act section 402, 33 USC 1342 per section 3.2.3 of <i>CERCLA Compliance with Other Laws Manual</i> .	No change is needed. The qualification from Lori Cora's 2010 letter is not appropriate for insertion into the ARARs chart as it is not a mandatory component of the ARAR but rather a discretionary determination based on the circumstances of the release. 42 USC 9621(d)(2)(B)(i) lists several factors to consider in determining whether any particular NRWQC is relevant and appropriate as a level or standard of control for the cleanup. EPA will apply all of the factors listed in making the technical determination regarding final surface water cleanup standards for the selected remedy.  The LWG's second comment appears to be confusing the chemical-specific ARAR from the action-specific ARAR which is Section 402 and applicable implementing regulations for point source discharges. If any NRWQC are determined to be relevant and appropriate as the level or standard of control for the cleanup of surface water, then those criteria also will be criteria that needs to be applied to a new point source discharge during implementation of the remedy. If a new point source discharge is needed to implement the remedy, then other substantive, applicable requirements of the CWA 402 implementing regulations, found at 40 CFR Part 122, will need to be complied with as well.
Protection of potential drinking water sources	Safe Drinking Water Act, 42 USC 300f, 40 CFR Part 141, Subpart O, App. A. 40 CFR Part 143	Establishes Maximum Contaminant Level Goals (MCLGs) and Maximum Contaminant Levels (MCLs) to protect human health from contaminants in drinking water.	Relevant and Appropriate as cleanup standards for groundwater and surface water at Portland Harbor, which are potential drinking water sources.	The LWG recommends reverting to the original sentence: "Relevant and Appropriate as a performance standard for groundwater and surface water that are potential drinking water sources." We disagree that these are "cleanup standards." Instead they are performance standards to be applied at point of use to drinking water taken from groundwater or surface water, which is how the SDWA is applied. (Also, the placement of the comma changed the meaning of the original text.)	Non-zero MCLGs and MCLs are relevant and appropriate standards for cleanup of contaminated groundwater and surface water that are potential drinking water sources. The statute, at 42 USC 9621(d)(2)(A), specifically requires that these standards from the Safe Drinking Water Act be required by any remedial action where they are relevant and appropriate to the circumstances of the release or threatened release. They are relevant and appropriate and not applicable because the SDWA only applies them at the tap.  There is no substantive difference between the terms cleanup standard and performance standard when discussing chemical-specific ARARs, as both terms set forth a specific level or standard of control that would need be achieved as part of the remedy. Both terms will be used in the FS and selected remedy depending on the context. In 2010, EPA used the term "performance standard" in an early list of ARARs. As stated in Lori Cora's 2010 letter: "Performance standard" was meant to have a meaning broader than cleanup standard. The Safe Drinking Water Act MCLs likely will have different functions depending on the media and remedy component it is applied to. MCLs will be cleanup standards for groundwater at the site; a performance standard for designing caps; and a long-term monitoring standard for TZW and surface water at the site." That statement is still accurate. As the FS and selected remedy get more specific and defined, the application of non-zero MCLGs and MCLs as a remediation goal/cleanup standard or performance standard will be further refined and described.
Measure of protectiveness of human health and the environment in all media	Oregon Environmental Cleanup Law ORS 465.315. Oregon Hazardous Substance Remedial Action Rules OAR 340-122-0040(2)(a) and (c), 0115(2-6).	Sets standards for degree of cleanup required for hazardous substances. Establishes acceptable risk levels for human health at $1 \times 10^{-6}$ for individual carcinogens, $1 \times 10^{-5}$ for multiple carcinogens, and Hazard Index of 1 for noncarcinogens; and protection of ecological receptors at the individual level for threatened or endangered species and the population level for all others.	A risk-based numerical value that, when applied to site-specific conditions, will establish concentrations of hazardous substances that may remain or be managed on-site in a manner avoiding unacceptable risk.		

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Protection of surface water	Water Pollution Control Act ORS 468B.048. Water Quality Standards OAR Part 340, Division 41	DEQ is authorized to administer and enforce CWA program in Oregon. DEQ rules designate beneficial uses for water bodies and narrative and numeric water quality criteria necessary to protect those uses. OAR 340- 041-0340 designates and defines the beneficial uses that shall be protected in the Willamette Basin.	Oregon's numeric toxics water quality standards (Tables 30 and 40) are applicable requirements as cleanup standards for surface water to the extent they are more stringent than Clean Water Act 304(a) recommended criterion. All state water quality standards, including numeric, narrative, and designated uses, are applicable requirements for any discharges to surface water from point sources and activities that may result in discharges to waters of the state, such as dredge and fill, de-watering sediments, and other remedial activities. All state water quality standards are applicable to measuring controls on contaminated groundwater discharging to the Willamette River.	The LWG disagrees that Oregon's numeric toxics water quality standards are applicable requirements as cleanup standards. The first sentence should read "Oregon's numeric toxics water quality standards (Tables 30 and 40) are relevant and appropriate as cleanup standards for surface water to the extent they are more stringent than Clean Water Act 304(a) recommended criterion," subject to qualifier stated in 2/10/10 letter from Lori Cora to Patricia Dost. The LWG also disagrees with the accuracy of the last sentence and asks that it be deleted. State WQS are written to be applied to surface water, not groundwater.	The LWG did not provide a rationale for its first comment. Oregon's numeric toxics water quality standards in Tables 30 and 40 are promulgated, enforceable criteria that waters of the state of Oregon must achieve to protect beneficial uses. They are applicable standards the Willamette River must achieve to protect designated uses. The qualifier statement in Lori Cora's 2/10/10 letter is not appropriate to be added to the ARARs chart for the reason stated above and, in particular, not in relation to the human health criteria promulgated by Oregon and approved by EPA based on a fish consumption rate of 175 grams per day. Such standards are more stringent than current NRWQC. As for the LWG's last comment, again no rationale or legal authority was provided to support it. Numeric criteria and narrative water quality standards are developed to protect designated uses. Oregon's water quality standards apply to "waters of the state" which is defined to include "all other bodies of surface or underground waters, natural or artificial. . . ." See OAR 340-041-0002(72).  Oregon's designated uses for the Willamette Basin are contained in OAR 340-041-340, Table 340A, which includes but is not limited to, private and public domestic water supply, fish and aquatic life, and fishing. See below for excerpts from Oregon's water quality standards regulations. Definitions 340-041-0002 Definitions Definitions in this rule apply to all basins unless context requires otherwise.  (72) "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.  340-041-0007
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**LWG Comments on Table 2.1.2. Action-Specific ARARs for Remedial Action at the Portland Harbor Superfund Site**

Action	Regulation/Citation	Criterion/Standard	Comments	LWG Comments	EPA Response
Actions that discharge dredged or fill material into navigable waters	Clean Water Act, Section 404 and Section 404(b)(1) Guidelines, 33 USC 1344, 40 CFR Part 230	Regulates discharge of dredged and fill material into navigable waters of the United States.	Applicable to dredging, covering, capping, and designation and construction of in-water disposal sites and in-water filling activities in the Willamette River.		
Actions that discharge pollutants to waters of U.S.	Clean Water Act, Section 402, 33 USC 1342	Regulates discharges of pollutants from point sources to waters of the U.S., and requires compliance with the standards, limitations and regulations promulgated per Sections 301, 304, 306, 307, 308 of the CWA.	Relevant and Appropriate to remedial activities that result in a discharge of pollutants from point sources to the river if more stringent than state promulgated point source requirements.		
Actions that discharge pollutants to waters of U.S.	Clean Water Act, Section 401, 33 USC 1341, 40 CFR Section, 121.2(a)(3), (4) and (5)	Any federally authorized activity which may result in any discharge into navigable waters requires reasonable assurance that the action will comply with applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of the Clean Water Act.	Relevant and Appropriate to implementation of the remedial action that results in a discharge to the river if more stringent than state implementation regulations.		
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	Water Pollution Control Act ORS 468B.048 Regulations Pertaining to NPDES Discharges OAR 340-041, 340-042	Effluent limitations and management practices for point-source discharges into waters of the state (otherwise subject to NPDES permit but for on-site permit exemption).	Applies state water quality standards and effluent limitations to point-source discharges to the Willamette River.		
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	Certification of Compliance with Water Quality Requirements and Standards ORS 468b.035, OAR 340-041, 340-042, 340-048	Provides that federally-approved activities that may result in a discharge to waters of the State requires evaluation whether an activity may proceed and meet water quality standards with conditions, which if met, will ensure that water quality standards are met.	Applicable to implementation of the remedial action (e.g., dredging, capping, and construction of confined disposal facility) that may result in a discharge to waters of the State.		
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	ORS 196.825(5) -Statutory requirement to require mitigation. Implementing rules: OAR 141-085-510, 141-085-680, 141-085-0685, 141-085-0690, 141-085-0710, 141-085-715.	Substantive requirements for mitigation for the reasonably expected adverse effects of removal or fill in a project development in waters of the state, including in designated Essential Indigenous Anadromous Salmonid Habitat.	Applicable to remedial action dredge and fill activities, capping, and riverbank remediation.	OAR 141-085-0765 should be included in column B.	As the alternatives get further refined, whether certain RCRA regulations will be applicable or relevant and appropriate to on-site remedial actions will become more clear and the ARARs chart will be revised accordingly. Nonetheless, in the end it makes no substantive difference whether an ARAR is applicable or determined to be R&A as they are equally enforceable once identified as ARAR.
Actions in federal navigation channels	River and Harbors Act, 33 USC 401 et seq. 33 CFR parts 320 to 323	Section 10 prohibits the unauthorized obstruction or alteration of any navigable water. Structures or work in, above, or under navigable waters are regulated under Section 10.	Applicable requirements for how remedial actions are taken or constructed in the navigation channel.		
Transportation of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 260, 261	Establishes identification standards and definitions for material exempt from the definition of a hazardous waste.	Applicable to characterizing contaminated media or hazardous wastes generated from the action and designated for off-site or upland disposal; potentially relevant and appropriate for use in identifying acceptance criteria for confined in-water disposal.		
Transportation of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 260, 262	Includes manifest, record-keeping, and other requirements applicable to generators of hazardous waste.	Applicable to remedial actions that involve the transport of hazardous materials (i.e., dredged material)	The comment should be revised as follows: "Applicable to remedial actions that involve the transport of hazardous waste (i.e., dredged material)."	As the alternatives get further refined, whether certain RCRA regulations will be applicable or relevant and appropriate to on-site remedial actions will become more clear and the ARARs chart will be revised accordingly. Nonetheless, in the end it makes no substantive difference whether an ARAR is applicable or determined to be R&A as they are equally enforceable once identified as ARAR.
Transportation of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 263	Sets forth standards for transporters of hazardous wastes, including receipt of an EPA identification number and manifesting requirements.	Relevant and appropriate for remedial actions that involve the transport of hazardous materials (i.e., dredged material).	The LWG is not sure why this one is "relevant and appropriate" instead of "applicable." It should be revised to: "Applicable to remedial actions that involve the transport of hazardous waste (i.e., dredged material)."	As the alternatives get further refined, whether certain RCRA regulations will be applicable or relevant and appropriate to on-site remedial actions will become more clear and the ARARs chart will be revised accordingly. Nonetheless, in the end it makes no substantive difference whether an ARAR is applicable or determined to be R&A as they are equally enforceable once identified as ARAR.
Transportation of and storage and disposal of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 264 and 265	Management standards including record keeping, requirements for particular units such as tanks or containers, and other requirements applicable to owners and operators of hazardous waste treatment, storage and disposal facilities.	Relevant and appropriate to remedial actions that involve the off-site transport of hazardous materials for storage and/or disposal (i.e., dredged material).	The LWG is not sure why this one is "relevant and appropriate" instead of "applicable." It should be revised to: "Applicable to remedial actions that involve the transport of hazardous waste (i.e., dredged material)."	As the alternatives get further refined, whether certain RCRA regulations will be applicable or relevant and appropriate to on-site remedial actions will become more clear and the ARARs chart will be revised accordingly. Nonetheless, in the end it makes no substantive difference whether an ARAR is applicable or determined to be R&A as they are equally enforceable once identified as ARAR.
Disposal of samples and remedial waste	Resource Conservation and Recovery Act. 40 CFR 268	Places land disposal restrictions, including treatment standards and related testing, tracking and record keeping requirements on hazardous waste.	Applicable for waste generated from remedial process and analyzed samples transported off site for disposal.	This regulation is applicable to hazardous wastes, not remediation waste. It should read "Applicable to hazardous waste transported offsite for disposal."	
Upland and in-water disposal of dredge material	RCRA – Solid Waste. 40 CFR 257 Subpart A	Establishes criteria for determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment.	RCRA Solid Waste requirements may be relevant and appropriate to remedial actions that result in upland or in-water disposal of dredged material. Requirements for the management of solid waste landfills may be relevant and appropriate to upland disposal.		
Transportation of hazardous waste off-site	Hazardous Materials Transportation Act. 49 USC §5101 et seq. 40 CFR Parts 171-177	Establishes requirements for acceptance and transportation of hazardous materials by private, common, or contract carriers by motor vehicle.	Hazardous Materials Transportation Act requirements are applicable to remedial actions that involve the transport of hazardous materials (i.e., dredged material).		

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Onsite treatment, disposal, storage of hazardous waste	Hazardous Waste and Hazardous Materials II. ORS 466.005(7) OAR 340-102-0011 - Hazardous Waste Determination	Defines "Hazardous Waste" and the rule contains the criteria by which anyone generating residue must determine if that residue is a hazardous waste.	Specifies substantive requirements if remedial action will involve on-site treatment, disposal, or storage of RCRA-listed or characteristic hazardous waste. (Note: off-site treatment, storage, or disposal subject to all administrative and substantive state requirements.)		
Onsite treatment, disposal, storage of hazardous waste	Hazardous Waste and Hazardous Materials II. Identification and Listing of Hazardous Waste OAR 340-101-0033	Identifies additional residuals that are subject to regulation as hazardous waste under state law.	Specifies requirements if remedial action will involve on-site treatment, disposal, or storage of additional listed wastes.		
Onsite treatment, disposal, storage of non-hazardous waste	Solid Waste: General Provisions. ORS 459.005, OAR 340-093, 340-094	Substantive Requirements for the location, design, construction, operation, and closure of solid waste management facilities.	Applicable if upland disposal facility contemplated on-site for solid, nonhazardous, waste disposal, handling, treatment, or transfer. (Note: off-site transfer, treatment, handling, or disposal subject to all administrative and substantive state requirements.)		
Onsite treatment, disposal, storage of non-hazardous waste	Solid Waste: Land Disposal Sites Other than Municipal Solid Waste Landfills ORS 459.015, OAR 340-095	Requirements for the management of solid wastes at land disposal sites other than municipal solid waste landfills.	Applicable to the on-site management and disposal of contaminated sediment, soil, and/or groundwater.		
Actions handling PCB remediation wastes and PCB containing material	Toxic Substances Control Act, 15 USC §2601 et seq., 40 CFR Part 761.60-761.79	Establishes requirements for handling, storage, and disposal of PCB-containing materials, including PCB remediation wastes, and sets performance standards for disposal technologies for materials/wastes with concentrations in excess of 50 mg/kg. Establishes decontamination standards for PCB contaminated debris.	TSCA requirements are applicable to the handling of contaminated material, debris, or surface water with PCB contamination.		
Risk-based limits protective of human health for air emissions associated with soil or sediment removal	Clean Air Act, 40 CFR Parts 50 and 52	Air emissions from stationary and mobile sources that may be generated that creates threats to human health as defined in the regulations.	Relevant and Appropriate to remedial activities that generate air emissions.		
Actions generating air emissions	Oregon Air Pollution Control ORS 468A et seq., General Emissions Standards OAR 340-226	DEQ is authorized to administer and enforce Clean Air program in Oregon. Rules provide general emission standards for fugitive emissions of air contaminants and require highest and best practicable treatment or control of such emissions.	Applicable to remedial actions taking place in on-site uplands. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile-source exhaust, among other things.		
Actions generating air emissions	Fugitive Emission Requirements OAR 340-208	Prohibits any handling, transporting, or storage of materials, or use of a road, or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne. These rules for "special control areas" or other areas where fugitive emissions may cause nuisance and control measures are practicable.	Applicable to remedial actions taking place in on-site uplands. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile-source exhaust, among other things.		
Actions that may affect fish and wildlife	Fish and Wildlife Coordination Act. 16 USC 662, 663 50 CFR 6.302(g)	Requires federal agencies to consider effects on fish and wildlife from projects that may alter a body of water and mitigate or compensate for project-related losses, which includes discharges of pollutants to water bodies.	Potentially applicable to determining impacts and appropriate mitigation, if necessary, for effects on fish and wildlife from filling activities or discharges from point sources.		
Presence of protected species	ODFW Fish Management Plans for the Willamette River. OAR 635, div 500	Provides basis for in-water work windows in the Willamette River.	Potentially applicable to timing of implementation of the remedial action due to presence of protected species at the site.		
Actions that may affect marine mammals	Marine Mammal Protection Act. 16 USC §1361 et seq. 50 CFR 216	Imposes restrictions on the taking, possession, transportation, selling, offering for sale, and importing of marine mammals.	Applicable to remedial actions that have the potential to affect marine mammals.		
Actions that may affect migratory birds	Migratory Bird Treaty Act. 16 USC §703 50 CFR §10.12	Makes it unlawful to take any migratory bird. "Take" is defined as pursuing, hunting, wounding, killing, capturing, trapping and collecting.	Applicable to remedial actions that have the potential to effect a taking of migratory birds.		

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